

What is claimed is:

1. A method of detecting and recovering from violations in a peer-to-peer relay network, comprising:

5 receiving a message at a peer system from a sending peer system connected to said peer system in a peer-to-peer relay network;

detecting a violation in said received message; and

sending an alert message to each peer system connected to said peer system in said peer-to-peer relay network;

10 wherein each peer system in said peer-to-peer relay network stores a connection limit defining a number of other peer systems up to which that peer system is permitted to connect, and

each peer system stores a set of one or more relay rules for relaying data to other peer systems connected to that peer system.

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2. The method of claim 1, wherein:

said violation is a cheating violation.

3. The method of claim 2, further comprising:

20 receiving a respective additional message from each of at least one other peer systems connected to said peer system;

wherein detecting said cheating violation includes:

comparing said message from said sending peer system with each of said additional messages; and

25 determining that said message from said sending peer system is different from at least one of said additional messages.

4. The method of claim 2, wherein:

detecting said cheating violation includes:

30 generating predicted data;

comparing said message from said sending peer system with said predicted data;
and

determining that said message from said sending peer system is different from
said predicted data.

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5. The method of claim 4, further comprising:

sending said predicted data to each peer system connected to said peer system in
said peer-to-peer relay network.

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6. The method of claim 1, wherein:

said violation is a security violation.

7. The method of claim 6, wherein:

detecting said security violation includes detecting invalid data in said message.

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8. The method of claim 6, wherein:

detecting said security violation includes detecting said message was sent using
improper sending procedures.

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9. The method of claim 8, wherein:

said message was sent as part of denial of service attack.

10. The method of claim 1, further comprising:

ignoring further messages sent by said sending peer system.

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11. The method of claim 1, further comprising:

causing said sending peer system to disconnect from said peer-to-peer relay
network.

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12. The method of claim 1, further comprising:

sending said alert to a server connected to said peer system.

13. The method of claim 1, further comprising:
the data relayed by peer systems is update data for a network environment.
- 5 14. The method of claim 1, wherein:
the data relayed by peer systems is update data for an online game.
15. The method of claim 1, wherein:
at least one peer system is a network-enabled game console.
- 10 16. The method of claim 1, wherein:
at least two peer systems are connected through the Internet.
17. A peer system in a peer-to-peer relay network, comprising:
15 means for receiving a message at a peer system from a sending peer system
connected to said peer system in a peer-to-peer relay network;
means for detecting a violation in said received message; and
means for sending an alert message to each peer system connected to said peer
system in said peer-to-peer relay network;
- 20 wherein each peer system in said peer-to-peer relay network stores a connection
limit defining a number of other peer systems up to which that peer system is permitted to
connect, and
each peer system stores a set of one or more relay rules for relaying data to other
peer systems connected to that peer system.
- 25 18. The peer system of claim 17, wherein:
said violation is a cheating violation.
19. The peer system of claim 17, wherein:
30 said violation is a security violation.

20. The peer system of claim 17, further comprising:

means for sending said alert to a server connected to said peer system.

21. A computer program, stored on a tangible storage medium, for use in a peer

5 system in a peer-to-peer relay network, the program comprising executable
instructions that cause a computer to:

process a received message at a peer system from a sending peer system

connected to said peer system in a peer-to-peer relay network

detect a violation in said received message; and

10 send an alert message to each peer system connected to said peer system in said
peer-to-peer relay network;

wherein each peer system in said peer-to-peer relay network stores a connection
limit defining a number of other peer systems up to which that peer system is permitted to
connect, and

15 each peer system stores a set of one or more relay rules for relaying data to other
peer systems connected to that peer system.

22. The computer program of claim 21, wherein:

said violation is a cheating violation.

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23. The computer program of claim 21, wherein:

said violation is a security violation.

25 24. The computer program of claim 21, further comprising executable instructions

that cause a computer to:

send said alert to a server connected to said peer system.